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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,273	09/10/2003	Junichi Minato	242553US2	4029
22850 7590 09/16/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
CAMPOS, YAIMA				
ART UNIT		PAPER NUMBER		
2185				
NOTIFICATION DATE		DELIVERY MODE		
09/16/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/658,273

**Applicant(s)**

MINATO, JUNICHI

**Examiner**

YAIMA CAMPOS

**Art Unit**

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14, 16-21 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14, 16-21, 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
- Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. As per the instant Application having Application number 10/658,273, the examiner acknowledges the applicant's submission of the amendment dated 6/17/2009. At this point, claims 14, 16-17, 20-21 and 25-27 have been amended. Claims 14, 16-21 and 25-27 are pending.

### REJECTIONS BASED ON PRIOR ART

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 14, 16-20 and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US 6,965,893) in view of Sakata (US 5,528,361) and McIntyre et al. (US 5,245,702).

4. As per claim 14, Chan discloses An image forming apparatus, comprising:  
a display device; [“to a display 712” (fig. 7 and related text)]  
a plurality of hardware resources configured to carry out image formation; [plurality of computer nodes (Refer to fig. 7 wherein the embodiment of a node is shown) on a network sharing resources such as printers and memory for execution of a plurality of application programs/processes (col. 1, lines 13-33) wherein computers and shared resources may perform image formation]

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a plurality of application programs performing respective processing of the plurality of application programs related to the image formation; **[plurality of computer nodes on a network sharing resources such as printers and memory for execution of a plurality of application programs/processes (col. 1, lines 13-33) wherein computers and shared resource may perform image formation]**

a storage device storing rewritable shared data which is used by the plurality of application programs in common; **[plurality of computers nodes on a network sharing resources such as “data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed in other ways (e.g. written to) by only one process at a time” (col. 1, lines 1-33; fig. 2 and related text)]**

and a shared-data control unit selecting one or more of the plurality of application programs as destinations of updating-start notification and notifying a start of updating of the shared data to the selected application programs when acquisition and updating of the shared data is inhibited in response to a write-lock request received from one of the plurality of application programs, **[“the processes on nodes 210-O to 210-N have access to various resources in a computer network... a lock manager 230 (*interpreted as shared-data control unit*) resides in a node 210, e.g., 210-O... a node is said to be seeking to obtain a lock when any process on the node is seeking to obtain a lock” (col. 4, lines 55-65) wherein “data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed in other ways (e.g. written to) by only one process at a time” (col. 1, lines 1-33; fig. 2 and related text) “Ownership of an exclusive mode lock 150**

grants a process permission to perform any operation on a table and guarantees that no other process is performing any operation on the table" (col. 1, lines 53-59); thus, an exclusive lock in interpreted as the claimed write-lock. Chan further explains "lock manager 230 broadcast message to all nodes 210 for all nodes 210 to set their corresponding local exclusive lock flags 220" (col. 7, lines 4-11) wherein "if an exclusive lock is granted for a resource to any one node 210 of the plurality of nodes 210, then all local exclusive lock flags 220 for the resource in all nodes are set" (col. 5, lines 23-26) wherein an exclusive access lock is required for writing data since it guarantees no other process can perform any operation on the data, thus when acquiring an exclusive lock for writing purposes, the indication to other nodes of the exclusive lock acquisition comprises an updating-start notification] and the shared-data control unit notifying an end of the updating of the shared data to the selected application programs when the acquisition and updating of the shared data is allowed in response to an unlock request received from said one of the plurality of application programs, wherein ["upon releasing the exclusive lock, the node that is holding the exclusive lock in step 512 notifies the lock manager 230 that the exclusive lock has been released. Lock manager 230 in step 516 in turn notifies requesting nodes 210S that has been waiting for the exclusive lock to be released that that exclusive lock has been released. The lock manager 230 may, at this point, also cause all the local exclusive lock flags to be cleared..." (col. 6, lines 37-52) "Lock manager 230 then notifies requesting node 210S that the granted lock has been released for requesting node 210S to obtain the requested exclusive lock" (col. 7, lines 28-30) wherein requesting nodes are place in waiting queues to wait for

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**exclusive locks and are processed appropriately (col. 6, lines 53-62); thus when acquiring an exclusive lock for writing purposes, the release of the lock (or unlock) inherently indicates the end of updating of the shared data to the selected programs] one or more second application programs configured to not display the shared data on the displaying device [Chan discloses “the processes on nodes 210-O” (col. 4, lines 55-65) which share resources such as memory, modems, printers, databases, etc. (col. 1, lines 13-23) wherein one or more of these processes or applications programs is configured to not display data on the displaying device shown in fig. 7].**

However, Chan does not expressly disclose that the present invention is embodied in an image forming apparatus comprising a plurality of hardware resources provided to carry out image formation, the a plurality of application programs performing respective processing of the plurality of application programs related to the image formation, the plurality of applications programs include one or more first application programs configured to display the shared data on the displaying device, and one or more second application programs configured to not display the shared data on the displaying device, when the acquisition and updating of the shared data is inhibited in response to the write-lock request, the shared data control unit selects one of more first application programs as destinations of the updating-start notification and notifies the start of updating of the shared data to said selected one or more first application programs without selecting said one or more second application programs and without notifying the start of updating to said one or more second application programs, and when the acquisition and updating of the shared data is allowed in response to the unlock request, the shared data control unit notifies the end of the updating of the shared data to the selected one or more application

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programs without notifying the end of the updating of the shared data to said one or more second application programs.

Sakata discloses an image forming apparatus comprising a plurality of hardware resources provided to carry out image formation a plurality of application programs performing respective processing of the plurality of application programs related to the image formation as **[image forming apparatus having plurality of hardware resources such as “reading means for reading a document, recording means for forming an image on a recording sheet, and an operating section for allowing an operator to set desired modes while displaying various kinds of information” (col. 3, lines 58-67; figs. 1 and 2 and related text) wherein “the application controller 166 executes the various applications while arbitrating the interchange of image data between the scanner and plotter and the applications via the image memory 195” (col. 12, line 16-20; col. 11, lines 21-37) and wherein “a plurality of functions to share a single image memory” (col. 39, lines 37-38)].**

With respect to the limitations of the plurality of applications programs include one or more first application programs configured to display the shared data on the displaying device, and one or more second application programs configured to not display the shared data on the displaying device, McIntyre discloses **[computer system, which comprises a plurality of application programs (col. 3, lines 4-27), including programs configured to display shared data on a displaying device such as graphics applications which have direct graphics access to windows in a display controlled by a window system program (col. 6, lines 53-66) and other programs residing in a computer system such as the digital purpose computers in which the disclosed**

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invention may be embodied (col. 6, lines 24-46), configured to perform tasks other than displaying data, and are thus not configured to display data] when the acquisition and updating of the shared data is inhibited in response to the write-lock request, the shared data control unit selects one of more first application programs as destinations of the updating-start notification and notifies the start of updating of the shared data to said selected one or more first application programs without selecting said one or more second application programs and without notifying the start of updating to said one or more second application programs. McIntyre discloses [window and application programs request access to a shared memory lock page for the visible portion of the window (*which displays data*) in order to write data wherein only one program may hold the lock at a time, wherein, when one program holds the lock, another program requesting access to the lock is put to sleep until the lock page is unlocked (col. 6, line 67-col. 7, line 37; col. 12, lines 14-41), *thus, one or more programs which are configured to display data (since they are attempting access to the shared visible portion of the window) are notified other programs started updating (for example by putting the requesting programs to sleeps for the duration of the access by the program which holds the locks), wherein no other applications are notified of the start of updating, but only the display applications requesting the lock*] and when the acquisition and updating of the shared data is allowed in response to the unlock request, the shared data control unit notifies the end of the updating of the shared data to the selected one or more application programs without notifying the end of the updating of the shared data to said one or more second application programs McIntyre discloses [when a visible portion of the window page is unlocked, write or update access is

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**granted to a window or application program which was put to sleep as a result of another application program previously holding the lock (col. 12, lines 14-58) thus, one or more program(s) which are configured to display data (since they are attempting access to the shared visible portion of the window) are notified another program ended updating (for example, by being granted an update lock once it is unlocked by a program previously holding the lock), wherein no other applications are notified of the start of updating, but only the display applications requesting the lock].**

Chan, Sakata and McIntyre are analogous art because they are from the same field of endeavor of accessing a shared memory device by a plurality of processes or applications.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the system and method taught by Sakata wherein [**“a plurality of functions to share a single image memory” (Sakata; col. 39, lines 37-38)**] to control access to this shared image memory via locks, such as the system taught by Chan since Chan discloses [**“the invention is not limited to nodes and/or resources in a computer network. The techniques described herein are applicable to any system in which entity that seeks access to a resource that is access accessible to a plurality of entities” (col. 5, lines 1-5)**] such as the system taught by Sakata in which a plurality of applications access image memory. Further, modifying Sakata to control access to image memory via a lock as taught by Chan [**would improve the system as taught by Sakata since it would prevent stale data from being read from image memory by a reading process while another process is writing to image memory**]. It would further be obvious to one having ordinary skill in the art to modify the combination of Sakata and

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Chan to provide shared windows which are displayed, such as those taught by McIntyre, wherein access to the display data is controlled via a lock, which is granted only to applications configured to display data, in a manner such that a single application may obtain the lock at a time, since McIntyre discloses doing so would allow applications to display data, while preventing the display of stale data [(col. 10, lines 5-24)].

Therefore, it would have been obvious to combine Chan with Sakata and McIntyre for the benefit of creating an image forming apparatus to obtain the invention as specified in claim 14.

5. As per claim 16. The image forming apparatus according to claim 14 wherein the displaying device is an operation panel which is configured to display operational messages to an operator and receive input operational commands from the operator [Chan discloses “computer system 700 may be coupled via bus 702 to a display 712, such as a cathode ray tube (CRT), for displaying information to a computer user. An input device 714... is coupled to bus 702 for communicating information and command selections to processor 704... a mouse... for communicating direction information and command selections to processor 704 and for controller cursor movement on display 712” (col. 7, lines 52-64)] and [Sakata discloses “the operating section 113 includes keys for allowing the operator to enter desired information, and a display and indicators for informing the operator of the statuses of the copier” (col. 8, lines 30-33)].

6. As per claim 17. The combination of Chan, Sakata and McIntyre discloses The image forming apparatus according to claim 14 wherein the shared-data control unit selects as the destinations of updating-start notification at least one of the plurality of

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application programs configured not to read out the shared data from the storing device upon starting of the image forming apparatus [Chan discloses a “before a process can perform an operation on a resource, the process is required to obtain a lock that grants the process the right to perform the desired operation on the resource” (col. 2, lines 12-15), either a shared lock for read access or an exclusive lock for write access wherein in the preferred embodiment, all nodes are notified of the acquisition of an exclusive lock (col. 5, lines 9-31); thus even though Chan does not expressly disclose the applications do not read data upon the starting of the image system, one of ordinary skill in the art would recognize that when combining Chan with the image formation apparatus of Sakata so that access of applications to control memory is done via exclusive (or write) locks and shared (or read) locks, when starting the image formation apparatus of Sakata, none of the applications would read data unless they first acquire a lock as required by Chan (see above); thus, none of application programs selected to receive updating start notification (or indication that another program holds exclusive lock, since an exclusive lock is held for write access) are provided to read shared data upon system startup since they first must obtain a lock in order to read data]. Further, McIntyre discloses window or application programs must first acquire a lock before accessing display or visible window areas [(col. 6, line 67-col. 7, line 37; col. 12, lines 14-41)].

7. As per claim 18. The combination of Chan, Sakata and McIntyre discloses The image forming apparatus according to claim 14 wherein, when acquisition and updating of the shared data is inhibited and a read-lock request is received from one of the plurality of application programs to which a start of the updating of the shared data is not yet

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notified, the shared data-control unit notifies the start of the updating of the shared data to said one of the plurality of application programs and rejects acquisition of the shared data in response to the received read-lock request [Chan discloses an exclusive lock inhibits acquisition and updating of data (col. 1, lines 56-59; col. 5, lines 61-67) wherein in the background section, Chan discloses an embodiment in which “the requesting node is required to send a message to the remote master node. The lock manager then sends a response message to the requesting node to notify that node about whether a lock may be granted... When none of the nodes in the node group is holding an exclusive lock, and the requesting node is seeking a shared lock, the lock manager can grant the lock to the requesting because there are no conflicts” (col. 2, lines 32-49) “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table, and guarantees that no other process is performing any operation on the table” (col. 1, lines 56-59); thus any shared lock requests such as read requests would be rejected and a response message would be sent to the requesting node indicating a node is holding an exclusive lock and the read lock or shared lock may not be granted access wherein when an exclusive lock is obtained for write access, wherein the response indicating the lock is exclusively owned comprises write start notification]. Further note that a plurality of read accesses may be obtained when any of the processes holds a shared lock; however, when any of the processes holds an exclusive lock which is necessary for write access, no other process may have access to the data; thus when a process is writing and an indication is sent to a read (or shared) lock request denying the lock, this indication inherently comprises update start notification.

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8. As per claim 19. The combination of Chan, Sakata and McIntyre discloses The image forming apparatus according to claim 14 wherein, when acquisition and updating of the shared data is inhibited and an application use request is received from one of the plurality of application programs to which a start of the updating of the shared data is not yet notified, the shared data control unit notifies the start of the updating of the shared data to said one of the plurality of application programs [Chan discloses an exclusive lock inhibits acquisition and updating of data (col. 1, lines 56-59; col. 5, lines 61-67) wherein in the background section, Chan discloses an embodiment in which “the requesting node is required to send a message to the remote master node. The lock manager then sends a response message to the requesting node to notify that node about whether a lock may be granted... When none of the nodes in the node group is holding an exclusive lock, and the requesting node is seeking a shared lock, the lock manager can grant the lock to the requesting because there are not conflicts” (col. 2, lines 32-49) “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table, and guarantees that no other process is performing any operation on the table” (col. 1, lines 56-59); thus when exclusive lock is held, a message is sent to requesting node indicating a node is holding an exclusive lock any other request may not be granted access; wherein when an exclusive lock is obtained for write access, wherein the response indicating the lock is exclusively owned comprises write start notification since an exclusive lock must be obtained for write access]. McIntyre further discloses [window and application programs request access to a shared memory lock page for the visible portion of the window (*which displays data*) in order to write data wherein only one

program may hold the lock at a time, wherein, when one program holds the lock, another program requesting access to the lock is put to sleep until the lock page is unlocked (col. 6, line 67-col. 7, line 37; col. 12, lines 14-41), *thus, one or more programs which are configured to display data (since they are attempting access to the shared visible portion of the window) are notified other programs started updating (for example by putting the requesting programs to sleeps for the duration of the access by the program which holds the locks)*].

9. As per claim 20. The combination of Chan, Sakata and McIntyre discloses The image forming apparatus according to claim 14 wherein, after the end of the updating of the shared data is notified to the selected application programs, the shared-data control unit inhibits updating of the shared data in response to a read-lock request received from any of the selected application programs to which the end of the updating of the shared data is notified [Chan discloses, nodes are notified when exclusive lock is released (col. 6, lines 10-20) wherein when an exclusive lock is obtained for write access, the release of the exclusive lock comprises an end of updating “and node 210S in step 416 then obtains a shared lock when local exclusive lock flag 220S is cleared” (col. 6, lines 24-26) wherein when a process holds a shared lock, no processes may update shared resources since an exclusive lock is required for updating (col. 1, lines 50-59; col. 2, lines 8-21), refer to “data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed 1 other ways (e.g. written to) by only one process at a time” (col. 1, lines 1-33; fig. 2 and related text)]. Further note that a plurality of read accesses may be obtained when any of the processes holds a shared lock; however, when any of

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the processes holds an exclusive lock which is necessary for write access, no other process may have access to the data.

10. As per claim 25. The combination of Chan, Sakata and McIntyre discloses The image forming apparatus according to claim 14 wherein the shared-data control unit is configured to receive at least one of an acquisition start request, an acquisition end request, an updating start request and an updating end request from an external network device [Chan discloses “the processes on nodes 210-O to 210-N have access to various resources on a network... lock manager resides in a node 210... a node is said to be seeking to obtain a lock when any process on the node is seeking to obtain a lock” (col. 4, lines 59-64) wherein processes perform lock requests to lock manager and release locks which comprise acquisition start and end request and receive acquisition start and end requests from manager indicating a node has acquired an exclusive lock or released an exclusive lock (col. 5, line 35-col. 7, line 30)].

11. As per claim 26. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14, wherein the shared data comprises destination address data which are used by the plurality of application programs in common [Chan discloses “data blocks of a storage medium or tables stored on a storage medium, may be concurrently accessed in some ways (e.g. read) by multiple processes, but accessed in other ways (e.g. written to) by one process at a time” (col. 1, lines 28-32) wherein “Ownership of an exclusive mode lock 150 grants a process permission to perform any operation on a table, and guarantees that no other process is performing any operation on the table” (col. 1, lines 56-59) wherein in order to perform memory accesses to a shared memory location, applications or processes

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**must comprise a destination address]. McIntyre discloses [shared memory communication areas (col. 12, lines 8-13)].**

12. As per claim 27. The combination of Chan and Sakata discloses The image forming apparatus according to claim 14, wherein the plurality of application programs include at least one of a scanner application program and a fax application program which use the shared data [Sakata discloses an image forming apparatus (col. 2, lines 11-14; refer to fig. 27) wherein "a facsimile application software" and a "scanner" both store data to "image memory 195" (col. 11, lines 53-67)].

13. **Claim 21** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chan et al. (US 6,965,893) in view of Sakata (US 5,528,361) and McIntyre et al. (US 5,245,702) as applied to claim 14, and further in view of Harris (US 6,912,621).

As per claim 21. The combination of Chan, Sakata and McIntyre discloses The image forming apparatus according to claim 14 but does not disclose expressly wherein the shared-data control unit is configured to include additional information, indicating that the updating of the shared data is not performed, in the updating-end notification which notifies the end of the updating of the shared data to the selected application programs.

Harris discloses a computer system for controlling access to a shared memory wherein the shared-data control unit is provided to include additional information, indicating that the updating of the shared data is not performed, in the updating-end notification which notifies the end of the updating of the shared data to the selected application programs as [Harris discloses a "all accesses to shared data should be made while the corresponding lock is held... To change data, a write lock must be

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held" (col. 18, lines 29-33) wherein when a write lock is to be released, "If the programmer is sure that no changes have been made to the structure, the lock may be released with sharedMem-ReleaseNoChange... This call does not copy the data or send it to the partner controller, so it is quicker and should be used when possible" (col. 10, lines 49-56)].

Chan, Sakata, McIntyre and Harris are analogous art because they are from the same field of endeavor of accessing a memory device by a plurality of processes or applications.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify combined system and method of Chan, Sakata and McIntyre wherein a plurality of applications access a shared memory and the access is controlled via exclusive and shared locks to further include additional information, indicating that the updating of the shared data is not performed, in the updating-end notification which notifies the end of the updating of the shared data to the selected application programs via a no change response message when releasing a write lock as taught by Harris since Harris discloses doing so is [provides high speed data sharing (col. 10, lines 49-56)].

Therefore, it would have been obvious to combine Chan with Sakata, McIntyre and Harris for the benefit of creating an image forming apparatus to obtain the invention as specified in claim 21.

**ACKNOWLEDGMENT OF ISSUES RAISED BY THE APPLICANT**

**Response to Amendment**

14. Applicant's arguments filed on 6/17/2009 have been fully considered but they are moot in view of the new ground(s) of rejection.

15. As required by M.P.E.P. § 707.07(f), a response to these arguments appears below.

**ARGUMENTS CONCERNING PRIOR ART REJECTIONS**

16. Claims must be given the broadest reasonable interpretation during examination and limitations appearing in the specification but not recited in the claim are not read into the claim (See M.P.E.P. 2111 [R-1]).

17. Regarding all other Claims not specifically traversed above and whose rejections were upheld, the Applicant contends that the listed claims are allowable by virtue of their dependence on other allowable claims. As this dependence is the sole rationale put forth for the allowability of said dependent claims, the Applicant is directed to the Examiner's remarks above. Additionally, any other arguments the Applicant made that were not specifically addressed in this Office Action appeared to directly rely on an argument presented elsewhere in the Applicant's response that was traversed, rendered moot or found persuasive above.

18. All arguments by the applicant are believed to be covered in the body of the office action; thus, this action constitutes a complete response to the issues raised in the remarks dated 6/17/2009.

**CLOSING COMMENTS**

***Conclusion***

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**Examiner's Note**

20. Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

**a. STATUS OF CLAIMS IN THE APPLICATION**

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21. The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

**a(1) CLAIMS REJECTED IN THE APPLICATION**

22. Per the instant office action, claims 14, 16-21 and 25-27 have received an action on the merits and are subject to a final rejection.

**a(2) CLAIMS NO LONGER UNDER CONSIDERATION**

23. Claims 1-13, 15, 22-24 and 28-34 have been canceled as of amendment dated 6/17/2009.

**b. DIRECTION OF FUTURE CORRESPONDENCES**

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yaima Campos whose telephone number is (571) 272-1232. The examiner can normally be reached on Monday to Friday 8:30 AM to 5:00 PM.

25. If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Sanjiv Shah, can be reached at the following telephone number: Area Code (571) 272-4098.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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September 8, 2009

/Yaima Campos/  
Examiner, Art Unit 2185

/Sanjiv Shah/  
Supervisory Patent Examiner, Art Unit 2185